

BUILDING A COMMUNITY LEGACY TOGETHER: THE EFFECTIVENESS OF A SHORT-
TERM INTERGENERATIONAL PROGRAM ON YOUTH AND OLDER ADULTS

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Wan Hung Yau

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ABSTRACT

The rapid growth of the aging population and prevalence of social isolation among older adults require appropriate interventions. Meanwhile the increase in age segregated communities limits the opportunity for youth to interact and learn from older adults. Intergenerational programs (IGPs) can be a solution to the above problems. In this paper, I introduce and examine the effectiveness of a short-term theory-based IGP. Youth and older adults were recruited and assigned to either the treatment or the control condition, and pretest and posttest were administered to all participants. Youth participants in the treatment condition were trained, and instructed to conduct an interview with older adults and present their findings in a community presentation. General linear regression model with random effect and meta-analysis were used to analyze the data. Youth in the treatment condition improved significantly on attitudes toward older adults and self-regarded purpose, compared to the control group. However, older adults in the treatment condition did not differ significantly compared to the control group on any outcomes examined. Nonetheless, both age groups reported highly positive qualitative feedback about the program. This short-term theory-based IGP partially achieved the anticipated results. Future IGP should be designed based on theories and be examined using both quantitative and qualitative data to support the effectiveness of programs prior to expansion.

BIOGRAPHICAL SKETCH

Wan Hung is a current M.A. student in Developmental Psychology, with a focus on aging and health. Wan Hung graduated from Colorado College with a B.A. in psychology in 2015. His research interests lie in successful aging and senior living. At Cornell, he works with Dr. Karl Pillemer at the Bronfenbrenner Center for Translational Research.

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Introduction

The rapid growth of the aging population and the prevalence of social isolation among older adults require an extensive social response. The older population in the United States is expected to increase from 43.1 million in 2012 to 83.7 million in 2050, almost doubling in size in less than 40 years (US census Bureau, 2014). In 2012, older adults only accounted for 14 percent of the total population, but they accounted for approximately 34 percent of all National Health Expenditures (NHE report, 2015). This ratio will likely increase over time. This population shift will create a major challenge for policy makers to find sufficient social and economic capital to support this segment of population.

At the same time, the increase in age segregated communities and a decrease in contact frequency between generations both contribute to the prevalence of social isolation among older adults. Indeed, older adults are at higher risk of being socially isolated than younger adults (Iliffe et al., 2007). In 2010, 18 percent of male and 34 percent of female persons age 65 or above were living alone. Although living alone does not necessarily indicate social isolation, it increases the chances that isolation will occur. Social isolation exacerbates the detrimental health effects that typically accompany aging, for instance increased risk of falls (Faulkner, Cauley, Zmuda, Griffin, & Nevitt, 2003), re-hospitalization (Mistry et al., 2001), cognitive decline and dementia (Fratiglioni, Paillard-Borg, & Winblad, 2004), likelihood of cardiovascular diseases (Shankar, McMunn, Banks, & Steptoe, 2011), and all-cause mortality (Steptoe, Shankar, Demakakos, & Wardle, 2013).

Identifying cost-effective ways to alleviate social isolation and the related deterioration of older adults' physical and cognitive health must be a high priority. Such initiatives have the potential to increase older adults' quality of life and in turn reduces the pressure on medical and

social need expenses, and is far more realistic.

Western societies are confronted by another important issue that must be addressed: the lack of meaningful connections between youth and older people. Societal changes limit the opportunities for youth to learn and be mentored by older adults. Increases in family mobility, the rising divorce rate, and a growing number of single parent families increase the segregation of the generations (Angelis, 1992). The lack of interactions increases the odds that youth may develop a negative attitude and stereotypes toward older adults based on incorrect prejudices and assumptions (Pettigrew & Tropp, 2006). Youth also miss the opportunity to be mentored by older adults and learn from their wisdom. Mentoring has positive effects on youth, including assisting the development of skills, exposing youth to new relationships and opportunities, and overcoming obstacles and barriers (Freedman, 1988; LoSciuto, Rajala, Townsend, & Taylor, 1996). To assist the development of youth, it is important to increase the contact frequency between youth and older adults.

Intergenerational programs (IGPs), which promote activities that bring together two generations for mutually rewarding purposes, are potentially an answer to the above challenges. This thesis aims to shed light on IGPs by examining the effectiveness of a model program that focuses on the sharing of elder wisdom. I begin by providing a review of prior relevant research on IGPs. I then describe an intervention designed to address possible gaps in previous intergenerational interventions and present results from a controlled study of this new program. I conclude with recommendations for future research on intergenerational programs.

Literature Review and Conceptual Framework

A scoping review was conducted to identify prior research on IGPs for youth and their impact on measurable outcomes (Maley, Yau, Wassel, Eckenrode, & Pillemer, 2017). Peer

reviewed English articles from 1980 to 2017 on the EbscoHost database were screened to search for programs that, at a minimum, used a pre-test and post-test design. The search terms were identified after a quick scoping on the selected databases:

("Intergenerational program" OR "Intergenerational Activity" OR "Intergenerational Interaction" OR "Intergenerational Contact") AND ("Experiment" OR "Pre Test" OR "Post Test" OR "Control" OR "Review") NOT ("Dementia" AND "Service-learning" AND "Mentor" AND "Elementary" AND "College")

Initially 186 articles were identified from the search. All articles were screened by title and abstract, and 140 articles that did not meet the inclusion criteria were excluded. A final cohort of nineteen articles were selected that fulfilled the research design requirement and age restriction (12 to 18 for youth and 55+ for older adults). For the purpose of this thesis, I augmented the scoping review with additional relevant review and empirical articles.

A number of gaps and limitations were identified in the scoping review. Intergenerational programs were typically conducted with a small number of participants (Kuehne & Kaplan, 2001). Within the nineteen included papers, five provided no information on the number of older participants, nine had fewer than 40 older adults in the treatment group (range: 12 to 39, participants) and five had over 50 participants (range: 52 to 266). The number of youth participants was more promising. Nine articles reported fewer than 50 youth participants in the treatment group (range: 9 to 44), and ten articles reported over 50 youth participants in the treatment group (range: 52 to 562).

The relatively small sample sizes made statistical analysis difficult, and thus the available literature can only provide weak support for conclusions and recommendations. Moreover, in addition to the limited number of empirical research articles identified, the lack of robust

research designs is also problematic. Within the nineteen articles, six articles used randomized control design, six used quasi-experimental design, and seven employed only a pre-test and post-test design.

As the limited number of studies that even employ a simple pre-test/post-test design indicates, IGP research is usually based solely on post-test qualitative data (Kuehne & Kaplan, 2001). Qualitative data provides valuable feedback on how to improve programs, but the data cannot be used to demonstrate the effectiveness of programs. Participants that highly enjoyed a program may not demonstrate desirable changes when assessed by validated quantitative scales (Barton, 1999). There is a call for more robust empirical research to systematically examine the programs before declaring as beneficial (Kuehne, 2003).

When limited to studies that do assess pre-test/post-test changes, the effects of IGPS are not conclusive and require further examinations. Attitude change is the most likely effect of IGP, under the assumption that by providing contact opportunities, older and younger generations can achieve mutual understanding on a personal level and attitudes will become more positive. While some research supports this claim (Aday, McDuffie, & Sims, 1993; Chapman & Neal, 1990; Chorn Dunham & Casadonte, 2009; Chua, Jung, Lwin, & Theng, 2013; Couper, Sheehan, & Thomas, 1991; Darrow, Johnson, & Ollenberger, 1994; Dooley & Frankel, 1990; Kassab & Vance, 1999; LoSciuto et al., 1996; Meshel & Mcglynn, 2004; Proller, 1989; Taylor, Losciuto, Fox, Hilbert, & Sonkowsky, 1999), other studies demonstrate no significant effect (Baggett, 1981; Doka, 1986) or even a negative effect on attitude change (Auerbach & Levenson, 1977; Barton, 1999). Given that attitude change should be the most anticipated and intuitively the most apparent effect of IGP, this pattern of findings raises questions about the presumed positive effects of IGP, and what factors influence the effectiveness of IGP.

One possible explanation of the negative attitude change is lack of sufficient skills and knowledge among youth on how to interact with older adults. Youth can be intolerant of dissimilar others (Erikson, 1968), and they commonly hold negative stereotypes of older adults. In such cases, interaction can be difficult or even unpleasant between two generations. Moreover, older adults can vary dramatically in age, cognitive ability, physical capacity, personality, experiences, and perspectives. If there is insufficient prior knowledge and unrealistic expectations, interacting with some older adults may intensify negative stereotypes. Therefore, it is important to provide sufficient preparation to equip youth with necessary expectations and skills for interaction and to handle possible obstacles.

Another explanation is lack of theory-based program design. IGPs are often developed without a conceptual or theoretical framework (Kuehne & Kaplan, 2001; Peterat & Mayersmith, 2006), but are instead based on the assumption that IGP must be beneficial (Gigliotti, Morris, Smock, Jarrott, & Graham, 2005; S. E. Jarrott & Smith, 2011; Shannon E. Jarrott, 2011; Kuehne, 2003; Kuehne & Melville, 2014). The scoping review demonstrated that of the 19 articles, nine did not explicitly mention any theoretical or conceptual framework, whereas 10 engaged with theory to some degree. Theory-based design is important, as the framework provides guidelines on which components to reinforce, how to improve practice, and how to develop a sustainable plan for expansion (Kuehne, 2003). Moreover, many IGPs are replicated by staff from other organizations in different communities. A clear conceptual framework can help to guide staff to execute programs in a consistent manner.

Despite these limitations in prior research, IGP approaches are a promising field to resolve the contact gap between generations, and offers numerous positive effects to both generations. Based on findings of more rigorous research, as well as qualitative indicators of

participants' assessments of their experience, there are grounds to hypothesize benefits for both youth and older participants.

Effects on youth

The evidence suggests that IGPs help to promote positive change in attitudes toward older adults (Aday et al., 1993; Chapman & Neal, 1990; Chorn Dunham & Casadonte, 2009; Chua et al., 2013; Couper et al., 1991; Darrow et al., 1994; Dooley & Frankel, 1990; Kassab & Vance, 1999; LoSciuto et al., 1996; Meshel & McGlynn, 2004; Proller, 1989; Taylor et al., 1999), and increased knowledge about older adults (Kassab & Vance, 1999; LoSciuto et al., 1996; Taylor et al., 1999). In terms of social behavior, IGP have been found to increase positive attitudes toward community service (Taylor et al., 1999), increase pro-social behavior (Kessler & Staudinger, 2007), and reduce substance use behavior (LoSciuto et al., 1996; Taylor et al., 1999).

Although more speculative, it is possible that IGPs will have a positive influence on health outcomes for youth. To the extent that IGPs increase positive attitudes toward older adults they may help younger generations to have a healthier future, because self-perceptions of aging influences cognitive outcomes (Levy, 2003), health outcomes (Levy, Slade, & Kasl, 2002), and longevity (Levy, Slade, Kunkel, & Kasl, 2002). Moreover, younger generation that participated in IGP were found in one study to report higher self-rated health (de Souza & Grundy, 2007). Despite such possible benefits, additional research is greatly needed that applies controlled designs to IGPs before such outcomes can be firmly established.

Effect on older adults

Among older adults, IGPs appear to promote positive attitudes toward younger generations (Aday et al., 1993; LoSciuto et al., 1996; Meshel & McGlynn, 2004). In terms of social behavior, IGPs may improve emotional health (Teater, 2016) and increase complexity of

emotion regulation (Kessler & Staudinger, 2007), reduce social isolation and loneliness (Murayama et al., 2015; Teater, 2016), increase intergenerational exchange (Sakurai et al., 2016), and increase generativity (Kessler & Staudinger, 2007). For cognitive functioning, IGPs may help to improve performance on speed and word fluency (Kessler & Staudinger, 2007), and to maintain memory functioning (Newman, Karip, & Faux, 1995). In terms of personal well-being, IGP participation has been found to be related to increased self-esteem (Proller, 1989; Teater, 2016), increased psychosocial well-being (Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005), reduced depression (Proller, 1989), improved physical functioning (Sakurai et al., 2016) and health (Teater, 2016), and increased or maintained self-rated health (Fujiwara et al., 2009) and health-related quality of life (Kamei et al., 2011).

Research questions for the present study

Based on this literature review, IGPs show preliminary positive effects on both generations. However, prior to widely expanded investment and implementation. There is a need for the IGP field to turn to theoretically based program design, identify core components of IGPs to ensure optimal effects, and conduct more robust empirical research with randomized control design to validate the effectiveness of programs before executing them on a larger scale.

Based on these considerations, the present study will address the following research questions: (1) First, examine whether a short-term theory-based intergenerational interaction can yield desirable effects; (2) compare qualitative and quantitative data, to identify possible gaps between the two types of data; and (3) identify the most useful components for a successful IGP implementation.

Rationale and intervention design for the present project

The Building a Community Legacy Together program (BCLT) is an intergenerational

program that involves youth (age 13-18) conducting individual interviews with older adults (age 65+). Administrated through Cornell Cooperative Extension (CCE), the program is led by CCE educators, who receive curriculum training and supervision from staff at Cornell University.

The conceptual basis of this program stems from the Legacy Project (Pillemer, 2011; 2015), with a core emphasis on advice giving by older adults, as the main feature of the BCLT (Figure 1). In the Legacy Project, approximately 1500 older persons were surveyed regarding their practical wisdom, and specifically their advice for living in a variety of domains. The goal of the project was to elicit and summarize practical wisdom and important lesson for living of America's elders. The findings of the Legacy Project provided evidence that older people are both able and willing to provide advice for younger generations in a structured interview situation.

Although the goal of the Legacy Project was not to examine outcomes for participants, two qualitative observations led to the development of an IGP based on the findings. First, many Legacy Project participants described the experience of offering advice in very positive terms, with some noting that the interview was the first time they had been invited to provide such counsel for younger individuals. Second, most of the interviews who conducted the surveys of older people in the Legacy Project were young (under the age of 30). In de-briefing sessions, these interviewers reported sometimes profound effects of the experience, noting that they had received advice that was both useful and influential. Thus, the development of the BCLT model leverages "practice-based evidence," in which the program logic emerges from the experience of individuals in real-world settings (Green, 2008; Pillemer et al., 2015).

The impetus for the program is supported by theory and research suggesting that advice-giving and sharing of wisdom can be beneficial for older people. By sharing advice, older adults

acquire an active and contributing role during interactions with youth, which helps to increase generativity and a sense of meaning (Hegeman, Roodin, Gilliland, & Ó'Flathabháin, 2010). Generativity is defined as a desire to guide and assist the development of the next generation (Erikson, 1968), and giving advice is one of the means to achieve such goals. Offering concrete guidance to younger people provides an opportunity for older adults to reappraise their past to determine the advice that they deem as most useful and valuable. Older adults derive the advice in the context of reviewing their past experience, which may also have beneficial effects (Sabir, Henderson, Kang, & Pillemer, 2016).

Advice giving also encourages reciprocity during the intergenerational interaction. Older adults often do not perform a contributing role in IGPs (Jarrott, 2011). A large proportion of IGPs are service-learning programs, in which youth volunteer to serve the older adults who are perceived as having deficits in health and social support. Limited involvement and absence of reciprocity of older adults diminishes the anticipated outcomes of IGPs, and are associated with increase in depression (Hernandez & Gonzalez, 2008). Similarly, a widespread intergenerational program involves “life history” interviews with older people, under the assumption that the opportunity to “tell their story” will benefit elders (Ehlman, Ligon, & Moriello, 2014; Ligon, Welleford, Cotter, & Lam, 2012). In such programs, the elder is understood to be the recipient of attention and interest.

In contrast, by featuring advice-giving in the intervention, both generations serve as provider and receiver during the interaction. The older adults receive the opportunity to interact with younger generations and to have the satisfaction of sharing advice based on their personal experience. The youth can benefit concretely from the advice received, and more broadly, engaging with elder wisdom on a personal level can assist in identity formation of young people.

(Kessler & Staudinger, 2007).

The design of the program helps to foster a positive interaction between youth and older adults as well. The interview process uses contact theory as the conceptual framework, in which Allport (2000) proposed that social interaction between two groups can foster accurate perceptions and reduce prejudice under four conditions: 1) equal status; 2) common goal; 3) intergroup cooperation; and 4) support of authority. This prevents any potential hierarchical relationship between two groups, that one group is offering a service for the other group. This also helps to ease the discomfort when first interacting with a novel group, as they perceive the other group as equal companion for a common goal.

Based on this conceptual background, three scales for youth and four scales for older adults, along with additional qualitative and quantitative questions, are selected to examine the outcomes of the program. The three scales for youth include attitudes toward older adults, purpose scale, and enjoyment interacting with older adults. The four scales for older adults include purpose scale, Loyola generativity scale, attitudes toward young people scale, and enjoyment interacting with young people scale. The following hypotheses guide the analyses to be presented in this thesis: 1) youth in the treatment condition will improve in all scales compared to the control group; 2) older adults in the treatment condition will increase in all scales compared to the control group; 3) there will be a gap between quantitative data and qualitative data, where participants will report high enjoyment in open-ended response but may not demonstrate desired quantitative change in some scales. In addition to the quantitative analysis, I will also analyze the qualitative data to show contributing and limiting factors toward the effectiveness of the program.

To test these hypotheses, the BCLT employed a more rigorous research design than is

typical for the field. It incorporates a randomized, controlled design that includes both quantitative and qualitative data. It is therefore possible to investigate the effectiveness of a short-term, yet intensive, intergenerational interaction.

The BCLT Intervention

Based on the program rationale, BCLT includes three interrelated components, which typically take approximately eight weeks-to complete. Each component corresponds to elements of the conceptual framework and is designed to remedy acknowledged gaps in the design of prior IGP interventions.

Interview training

The BCLT begins with an intensive interview training program, in which approximately eight hours of training and education are provided to youth. The goal of this training is to build skills and capacity for participants to interact with older adults. The training covers interview and communication skills tailored specifically to interactions with older adults; clarifying expectations when interacting with older adults, and methods to handle possible obstacles. Following intergroup contact theory and research (Allport, 2000; Pettigrew, 1998), youth may be prejudiced against or intolerant to dissimilar others, including elders. Because of unfamiliarity in interacting with elders outside of their own families, as well as commonly-shared negative stereotypes about aging and older people, initial interactions without adequate preparation can lead to negative effects. The intensive interview training prepares youth participants to comfortably interact with older people. In addition, youth are responsible for designing the interview questions, thus the topics are relevant and of interest to them.

Interview with older adults

Following the training, the youth are paired with an older adult to conduct an individual

interview. The older adults have prior knowledge on the purpose of the program and the interview questions; thus they have ample time to review their past and be prepared to share their advice. Typical questions generated by the youth participants have included: “What are some of the most important life lessons you feel that you have learned over the course of your life?”; “Can you give an example of something that happened to you in your life that taught you an important life lesson?”; “What is something that you know now that you wish you knew when you were my age?”. As noted earlier, both generations share the roles of receiver and provider, thus they are in equal status. Both generations are instructed to work together to elicit and record the advice of the older adults.

Community presentation

Upon completion of the BCLT interview, each youth participant is instructed to summarize the major lessons provided by his or her interviewee. The youth then take part in a group meeting, in which these lessons are shared and synthesized into a single list of the most important advice received for each of the questions. Guidance is provided by the group leader in analyzing the qualitative responses of the older persons and coming to consensus on a core set of lessons learned.

The BLCT program culminates in a presentation for the community members, in which the youth present what they have learned about elder wisdom, showcasing the major pieces of advice for younger people. The goal is to provide an opportunity for youth to publicly foster positive images of older people as sources of wisdom, thus reinforcing their individual experiences in the interviews. The older adults are invited to the community presentation, which reinforces the importance of their participations, increasing their sense of generativity and meaning.

Method

Development of the program

The BCLT program was developed over a three-years period, allowing for extensive input from community stakeholders involved in the project – Cornell Cooperative Extension (CCE) educators in several counties in New York State. The initial year was devoted to pilot-testing the initial version of the program and to identify potential obstacles and needed improvements. The involved CCE educators were requested to submit weekly reports and feedback on the program, including the recruitment process, the training delivery, the interview activity, and the community presentation. All reports and feedback were reviewed and analyzed, and were selectively used to modify the program in discussion with the CCE educators. The BCLT program in Year 1 was implemented in three CCE offices and the feedback provided by those offices were then used to modify the Year 2 program. Because of the developmental nature of the pilot year and the subsequent modification of the program based on the first-year experience, it is not included in the outcome evaluation.

Data analyzed in this thesis come from the formal evaluation activities conducted in Years 1 (2015-2016) and Year 2 (2016-2017) of the formal evaluation. In Year 1, the program was implemented in 7 counties and in Year 2 in 3 counties (Table 1). As discussed below, control groups were included in each of these years.

County selection (Treatment and control conditions)

Qualitative and quantitative data were collected from 9 counties in New York State by CCE educators in the two program cycles. All sites were New York State county CCE offices.

In Year 1, treatment sites were purposively recruited. An announcement was sent to 39 CCE associations who had previously expressed interest in taking part in research projects. Of

those contacted, 11 responded positively. Of these potential sites, we then selected 4 sites that were geographically dispersed throughout New York State. Three control communities were chosen from sites not selected for the treatment group, based on comparability in location and size to the treatment counties.

In the second program cycle (Year 2), we invited counties that had served either as treatment or control sites in Year 1 to participate in the program. Because the research design in Year 2 was more complex, we wished ensure experience and capacity in participating in research projects. Two Year 1 treatment sites and one Year 1 control site were selected to represent different regions of the state.

Participant recruitment

Recruitment methods for participants were similar in Years 1 and 2. The county program leaders were asked to recruit the youth and the older adults. They were instructed to use recruitment methods that they deemed as appropriate and effective, and the only restrictions were (1) youth must be in seventh grade or above, (2) the older participants were age 65 or older, and (3) the participants were willing to commit to the time needed for the project activities. The flexibility on recruitment was necessary to make the project feasible in different county environments.

One modification was made between Years 1 and 2 regarding youth eligibility. Specifically, in Year 2 the age of eligibility was changed to high school (excluding middle school students). This modification was based on feedback from the program leaders, who suggested that the program activities were more appropriate for older students. In particular, older youth were found to be more comfortable and adept at conducting the interview with older people.

All participation was voluntary, and participants were not compensated for joining the program. The method of recruiting participants differed by offices and by participant age groups, ranging from personal connection, association with other organizations, internal channel promotion, and press release and newspaper articles. In Year 1, each CCE office was instructed to recruit 10 youth and 10 older adults, because each site was assigned either as a treatment or a control group. In Year 2, each site was instructed to recruit 20 youth and 20 older adults, and participants were then randomly assigned into treatment and control conditions, 10 participants per condition. Informed consent was obtained from each participant, or parents in cases of minors.

Participant information

In Year 1, participants were recruited from seven counties' Cornell Cooperative Extension offices (Table 1). Participants consisted of four independent groups: youth (n=42, 26 females) and elders (n=40, 30 females) in the treatment group; and youth (n=35, 23 females) and elders (n=35, 26 females) in the control group. All participants completed the program. The ages of the youth participants ranged from 9 to 19, and the older participants ranged from 64 to 96. There was no apparent difference between the age of the youth treatment group and control group (15.05 vs. 15.20), nor between the age of the older treatment group and control group (75.83 vs. 75.66).

In Year 2, participants were recruited from three county Cornell Cooperative Extension offices, and participants from each county were randomly assigned into treatment or control group (). Participants consisted of four independent groups: youth (n=20, 11 females) and elders (n=22, 14 females) in the treatment group; and youth (n=21, 16 females) and elders (n=22, 14 females) in the control group. All participants completed the program. The ages of the youth

participants ranged from 13 to 18, and the older participants ranged from 65 to 99. There was no apparent difference between the age of the youth treatment group and control group (16.37 vs. 15.62). However, there was a significant difference between the age of the older treatment group and control group (76.55 vs. 71.52), $t(41)=2.28$, $p<.05$.

Measures

Participants answered a survey both before and after completion of the program. The pretest and posttest used the same quantitative dependent measures. The pretest contained questions on demographic information, including age, gender, race, and primary language for both groups, grade in school for youth, and highest grade finished in school and current marital status for older adults. The posttest had a feedback component that consisted both quantitative and qualitative questions. All items in each scale were regular or reverse coded accordingly, and the sum of items was divided by the number of items to obtain the average score for each scale.

The survey for youth participants consisted three quantitative scales, all consist both positive and negative items to avoid acquiescent bias and were modified as needed, as described below.

Attitude toward Older People Scale. Pillemer and Schultz (2002)'s attitude toward older people scale was adapted and modified for this program. This scale consisted nine items. Participants were asked to rate to what extent they agreed with the statement, on a scale of 1 (strongly agree) to 4 (strongly disagree). Items included "Most older people are set in their ways and unable to change"; "Most older people are not isolated"; "Older people are apt to complain"; "Older people can learn new things just as well as younger people can"; "People become wiser with the coming of old age"; "Older people are often against needed reform in our society because they want to hang on to the past"; "Most older people are in good health"; "Most older people spend

too much time prying into the affairs of others”; and “In most jobs, older people can perform as well as younger people”.

Purpose scale. Scheier et al. (2006)’s purpose test was adapted and modified to test for purpose scale. This scale consisted six items. Participants were asked to rate to what extent they agreed with the statement, on a scale of 1 (strongly agree) to 5 (strongly disagree). Items included “There is not enough purpose in my life”; “To me, the things I do are all worthwhile”; “Most of what I do seems trivial and unimportant to me”; “I value my activities a lot”; “I don’t care very much about the things I do”; and “I have lots of reasons for living”.

Enjoyment interacting with older people. This scale contained two 4-point questions. Participants were asked to rate “how comfortable are you talking to older adults?” and “how enjoyable are you being around older adults?”, on a scale of 1 (very negative) to 4 (very positive).

Additional Quantitative Measures. Single-item measures in the posttest included, “How enjoyable was BCLT?” (4-point scale), “How useful was your experience” (4-point scale), “How much do you feel you benefitted the older adults?” (4-point scale), “Would you recommend BCLT?” (binary scale), “Interview experience with older person?” (4-point scale), and several items evaluating participants’ rating of the program.

Qualitative Measures. Open-ended questions in the posttest included, “Things you got out of the BCLT program?”, and “How would you change the program?”.

The survey for elder participants consisted four quantitative scales, modified as needed, as described below.

Purpose scale. Scheier et al. (2006)’s purpose test was adapted and modified to test for purpose scale. This scale consisted six items. Participants were asked to rate to what extent they agree with the statement, on a scale of 1 (strongly agree) to 5 (strongly disagree). Items included

“There is not enough purpose in my life”; “To me, the things I do are all worthwhile”; “Most of what I do seems trivial and unimportant to me”; “I value my activities a lot”; “I don’t care very much about the things I do”; and “I have lots of reasons for living”.

Loyola Generativity scale. McAdams and de St. Aubin (1992)’s generativity scale was adapted and modified for this program. This scale consisted nine items. Participants were asked to rate to what extent the statement described them, ranging from 1 (describes me not at all) to 4 (describes me a lot). Items included “I try to pass along the knowledge I have gained through my experiences”; “I do not feel that other people need me”; “I feel as though I have made a difference for many people”; “I think that I will be remembered for a long time after I die”; “Others would say that I have made unique contributions to society”; “I have important skills that I try to teach others”; “I feel as though I have done nothing of worth to contribute to others”; “People come to me for advice”; and “I feel as though my contributions will exist after I die”.

Attitude Toward Young People scale. Anderson, Bromley, and Given (2005)’s scale consisted seven items. Participants were asked to rate to what extent they agreed with the statement, ranging from 1 (disagree strongly) to 5 (agree strongly). Items included “The behavior of young people today is no worse than it was in the past”; “The views of young people aren’t listened to enough”; “Girls are more badly behaved than boys nowadays”; “Most young people are responsible and well-behaved”; “Young people today have no respect for older people”; “Most young people are helpful and friendly”; and “Older people today have no respect for young people”

Enjoyment interacting with young people. This scale contained two 4-point questions.

Participants were asked to rate “how comfortable are you talking to young people?” and “how enjoyable are you being around young people?”, on a scale of 1 (very negative) to 4 (very

positive).

Additional Quantitative Measures. Single-item measures in the posttest included, “How enjoyable was BCLT?” (4-point scale).

Feedback Qualitative Measures. Open-ended question in the posttest included “What did you get out of participating in BCLT”.

Procedures

In Year 1, all participants were instructed to complete a pretest prior to the start of the youth training program. Youth participants then completed two 2-hour training sessions, including sessions on orientation to the BCLT; background on elders and elder wisdom; communication skills; interviewer training, in which youth were instructed to design the interview questions based on a list of sample questions, (older adult participants received a copy of the interview questions at least one week prior to the interview); and role play interviews. Youth were also asked to practice interviewing with someone they know before the official event.

After they completed the training, youth participants were randomly assigned to an elder participant to conduct the interview. For two treatment offices, dyads were randomly assigned prior to the interview, and for the other two treatment offices dyads were assigned on site before beginning the interview. The interview was approximately one hour long.

Upon completion of the interview, youth participants were instructed to individually summarize the major lessons learned, and to report their findings in a group meeting. With guidance from the group leader on analyzing the qualitative responses of the older adults and coming to consensus on the core set of lessons learned, the lessons reported by the youth participants were synthesized into a single list of the most important pieces of advice received

for each of the interview questions. Youth were then requested to plan for a community presentation.

In the community presentation, youth participants were asked to present the list of the most important lessons learned, showcasing the major pieces of advice. All older adults were invited to the community presentation, attendance varied by site, and the average attendance rate was approximately 60%. The presentation was approximately one hour long.

A posttest was administered to all participants two weeks after the community presentation. In the following weeks after completing the posttest, participants were contacted individually by phone for a 15-minute interview for additional qualitative feedbacks.

The same pretest and posttest, except the qualitative feedback component, were administered to all participants in the control condition. Data were obtained with approximately similar interval between two tests as the treatment group. No phone interview was conducted on the control groups.

In Year 2, the program was delivered with the same procedures. The only modification was that program leaders were asked to emphasize more on interview preparation and to spend more time on mock interviews.

Results

For further analysis, we eliminated the data of eight youth and nine elder participants for failing to complete either the pretest or the posttest. All data from one of the counties in Year 2 was eliminated for failing to complete the posttest. Final cohorts of 77 youth and 68 elder participants from Year 1, and 40 youth and 38 elder participants from Year 2 were used for the data analysis.

Participant Qualitative Evaluation of the Program

The qualitative feedback for both years were combined for evaluation. The two age groups in the treatment condition both reported high qualitative satisfaction with the program. Ninety four percent of the youth found the experience quite enjoyable, primarily citing that they enjoyed the interaction with elders and received good advice and wisdom. Further, 92 percent of the youth would recommend this program to other young people, noting that it was a positive experience, and a great opportunity to interact with elders. In addition, 87 percent of the youth reported that their experience in the BCLT was useful, both by learning new skills and by receiving helpful advice that will assist them in the future.

Of the elders, 90 percent of the elders interviewed by the youth participants reported finding the interaction with youth enjoyable, and 100 percent of the elders would recommend the BCLT program to others. The elders often cited that the youth were enthusiastic and well prepared. They reported that they were happy to share both their life stories and their practical advice.

The qualitative data obtained from both open-ended questions on the posttest survey and follow-up phone interviews were analyzed. Virtually all responses demonstrated qualitative perceptions of program success. Most of the youth reported that they had “learned a lot from the elders” and “the interview was amazing, the person had so much to say”. The youth stated that they “would like to conduct interviews with elders again”. Some youth reported a more positive attitude and view toward older adults, stated that “they are not different from us and are interesting to talk to”. All youth also reported positively toward the training program, and emphasized that the mock interview was particularly useful.

The elders also enjoyed their interaction with the youth, stated “I enjoyed talking to the young person” and “the young person was professional and well-prepared, I was very

impressed”. Older adults also had positive experience in sharing advice, “It gave me great pleasure, I was happy to have someone to share something with”, and stated that they would like to be interviewed again. One elder suggested that the age of the youth was too young, and some of the topics he shared may not be appropriate to someone her age. In addition, a concern was raised about some children being too reserved or shy. However, the suggestions for program improvement were very rare, and almost all responses to open-ended questions were very positive.

Analysis of Quantitative Outcome Data

Despite similarly positive assessments of the program, the two age groups showed different quantitative effects of the program. The youth in the treatment group improved significantly in attitudes toward older adults, was reaching significant difference on purpose, but did not differ significantly on enjoyment interacting with older adults (Table 2; 3); but the older adults in the treatment group did not demonstrate any significant change on scales examined compared to the control group (Table 4; 5).

A general linear regression model with counties treated as random effect and pretest score treated as a covariate was used to analyze the posttest score of each scale. The dependent variable was the average posttest score, and the independent variable was condition. County was treated as a random effect in the model because it varied across participants, and since it was impossible to recruit participants from all counties, this helped to demonstrate a common mean effect. Because of randomization at the person or cluster level, only pretest was included as covariate and it was assumed there was no other unobserved confounding. Hence age, gender, race and ethnicity were not included from the mode. The quantitative analysis of the data relies on the average scores of each scale. The data of participants that failed to complete all items in a

scale were excluded from the analysis of that scale. The assumptions of linear regression model were checked, and outliers were removed from each scale.

Different research method was used in Year 1 and Year 2, namely quasi-experimental design and randomized control design respectively, therefore the data cannot be combined to analyze the program effects. A meta-analysis was conducted on linear regression models of each scale for both years to demonstrate whether there was a treatment effect, and whether the treatment effect differed between two program cycles.

Analysis of Youth Outcomes

The effect of condition varied by different scales, where condition had significant influence on attitude toward older adults, was reaching significant level on purpose, but had no significant influence on enjoyment interacting with older adults' scale. Pretest score was always a significant predictor, indicating the reliability of the scales (Table 3).

Attitude toward older adults. In Year 1, condition had no significant influence on the posttest score, where the posttest score of participants in the treatment condition was not significantly higher than the participants in the control condition, $t(4)=1.59, p=.181$. In Year 2, condition was a significant predictor of the posttest score, $t(35)=3.53, p<.01$. The meta-analysis indicated that condition had significant influence on the posttest score, $B=.30, SE=.08, p<.0001$, and both years did not differ significantly, $Q(1)=.24, p=.63$.

Purpose scale. In Year 1, condition had no significant influence on the posttest score, where the posttest score of participants in the treatment condition was not significantly higher than the participants in the control condition, $t(65)=1.19, p=.24$. Also in Year 2, condition had no significant influence on the posttest score, $t(32)=1.41, p=.17$. The meta-analysis indicated that the influence of condition on posttest score was reaching a significant level, $B=.18, SE=.10, p=.07$.

Again, both years did not differ significantly, $Q(1)=.0001$, $p=.99$.

Enjoy interacting with older people. In Year 2, condition had no significant influence on the posttest score, $t(36)=.59$, $p=.56$.

Analysis of Elder Outcomes

Condition was not a significant predictor of the posttest score in any scale examined. The two meta-analysis confirmed the lack of effect. Pretest score had significant influence on all scales, indicated the reliability of scales (Table 5).

Purpose scale. In both Year 1 and Year 2, condition had no significant influence on the posttest score, $t(5)=1.19$, $p=.30$ and $t(35)=.44$, $p=.66$ respectively. The meta-analysis confirmed the lack of effect, $B=.10$, $SE=.09$, $p=.24$, indicated that condition had no significant influence on the posttest score. Both years did not differ significantly, $Q(1)=.23$, $p=.63$.

Loyola Generativity scale. In both Year 1 and Year 2, condition had no significant influence on the posttest score, $t(62)=-.51$, $p=.62$ and $t(32)=.11$, $p=.55$ respectively. The meta-analysis confirmed the lack of effect, $B=.01$, $SE=.08$, $p=.93$, indicated that condition had no significant influence on the posttest score. Both years did not differ significantly, $Q(1)=.61$, $p=.43$.

Attitudes toward young people. In Year 2, condition had no significant influence on the posttest score, $t(34)=-.09$, $p=.93$.

Enjoy interacting with young people. In Year 2, condition had no significant influence on the posttest score, $t(35)=.10$, $p=.92$.

Discussion

The present study showed the effectiveness of a theory-based short-term intergenerational program. The data supported the first hypothesis, that youth in the treatment condition

significantly improved in attitudes toward older adults and was reaching significant level on purpose scale compared to the control group. The data did not support the second hypothesis, in that older adults in the treatment condition did not significantly improve in any scale compared to the control group. The data supported the third hypothesis, that regardless of whether significant quantitative differences were observed, most of the participants highly enjoyed the program and provided positive qualitative feedback.

The results of the first hypothesis were consistent with previous literatures. Youth's attitudes toward older adults improved significantly after one interaction with elders that employed the contact theory. Also, youth's purpose increased after the program, indicating the benefits of interacting and receiving advice from older adults on youth's development. It is promising that a single interaction that was carefully designed and included sufficient preparation for the youth can have a significant influence on young people.

The lack of results supporting the second hypothesis, that older adults in the treatment condition will increase in all scales compared to the control group, should not be simply interpreted as a lack of effects of the programs. Older participants in this program reported highly positive attitudes toward young people and high purpose in the pretest. It is possible that the program did have the anticipated effects, but due to high initial scores, the changes were not statistically significant under the selected scales.

An unexpected finding was the unchanged generativity scale of older adults. This contradicted the original design of the program, that via sharing advice and wisdom with younger people, older adults will gain positive feeling and increase of generativity from being involved in the development of the younger people. It is possible the unchanged generativity scale was due to the duration of the program. Although older adults shared their wisdom and

advice in the one-hour interview, and the older adults attended the community presentation had the opportunity to confirm that young people were making use of their advices, older adults were unsure of how they had influenced the younger people. Without a longer involvement and observing the actual change of the young people, older adults may not think they had made an apparent influence on the young people, hence the unchanged generativity scale.

The program was a success as an intergenerational program that aimed to bring together two generations and promote attitude change. Both age groups reflected positively on the program, and were interested to participate in similar programs again. The young people enjoyed hearing the life stories and learning the wisdom of the older adults, while the older adults were pleased to have an opportunity to share their wisdoms with young people. Almost all responses to open-ended questions were very positive, with rare cases of negative comments on the age of the youth.

Based on the negative comments received, the Year 2 modified the age requirement of the youth participants to high school students only. However, the effect of the program did not differ significantly between Year 1 and Year 2 after compared using meta-analysis. Although in some cases, the stories shared by the older adults may not be entirely appropriate to younger participants, youth in both middle school and high school could comprehend the program, enjoy the interaction, and benefit from it after sufficient training and preparation.

Despite the positive feedback and supported hypotheses, there were a few limitations of the study. First, the sample was not sufficiently diverse. All participants were recruited from the same state with similar demographic and cultural background. Thus, it is unknown of whether the program has similar effects on people from different cultures. A more diverse sample can help to increase the generalizability of the results and adaptability of the program. Second, there

can be individual differences influencing the effects of the program that were unaccounted for. The degree of social isolation of older adults was not examined, and can be a potential confounding variable, that older adults with higher social isolation and loneliness can benefit more from the interaction with youth and an opportunity to build new relationships. Also, all older adults were recruited from various senior centers on a voluntary basis. This self-selection process limited the participant pool to only older adults who were willing, available, and sufficiently healthy to participate in volunteering programs, which limited the generalizability of the results. It is possible that older adults with less mental and physical capacity, for instance those living in senior care facilities, will demonstrate different effects of the program. Third, it would be helpful if longitudinal data could be obtained from participants. BCLT is a short-term intergenerational program, where youth and older adults only interacted twice. While it is an effective program, it is unknown whether participants will benefit in the long run. Such data can help to further support the effectiveness of advice sharing intergenerational programs.

There is a call for more robust quantitative research in the field of intergenerational programs. It is important to use reliable and validated measures to quantify the effects of programs, to document their benefits. It is insufficient to solely examine qualitative data due to the possible gap between qualitative satisfaction and quantitative benefits of programs. Meanwhile, gaps were also found in quantitative measures. The main feature of BCLT was advice giving. The interview questions were tailored to elicit wisdom and life lesson from older adults, and both youth and older adults understood the purpose of the program. Yet the program had no positive effect on older adults' generativity. The potential gap between expected and actual outcome is not a unique problem of BCLT, but also of other IGPs. Researchers should report and explain the lack of significant findings of their programs, and modify their program

based on those findings. Lack of findings can help to explore areas of improvement, and contribute to developing and validating useful components and effective frameworks. IGPs are still a developing field, and it is important for researchers to combine efforts to avoid the same mistakes and to suggest the best practices.

Also, it is important to design and implement programs based on theories. Theories help researchers to better understand how their programs provide the desired benefits. Also, through testing the effectiveness of different theories in implementing intergenerational programs, theories that deliver the best results can be adapted by future programs to ensure the effectiveness. Ultimately, the goal is to implement programs on a large-scale level, to benefit more youth and older adults. Theories help to provide a guidance on how to implement program, and to ensure the core elements are delivered as designed. A program without clear instruction for the researchers or the external collaborators on the core values is subjected to misinterpretation, and may influence the effectiveness of the program. IGPs are a growing field and requires more attention, but can only be accomplished when researchers are willing to explore and validate rules and theories, instead of presumably designing program without much consideration. Particularly, since IGPs can have negative influence on attitude change (Auerbach & Levenson, 1977; Barton, 1999), it is important to validate the effects of a program before implementing on a large-scale level.

Researchers should also conduct pilot studies prior to implementing in a larger scale. Pilot studies allow researchers to receive feedback from both quantitative and qualitative data, hence they can modify the program to achieve the desired and anticipated results. Also, preparations for both youth and older adults are important to ensure program success. It is important to teach youth on how to interact with older adults, since lack of effective

communication can be a barrier to positive interaction.

There are many similar changes suggested by other researchers for future studies, yet those changes are rarely found in other current studies (Jarrott, 2011). With the increasing scale and variety of intergenerational programs, it becomes more important to use the highest standard of scholars and theories to design and inform new programs.

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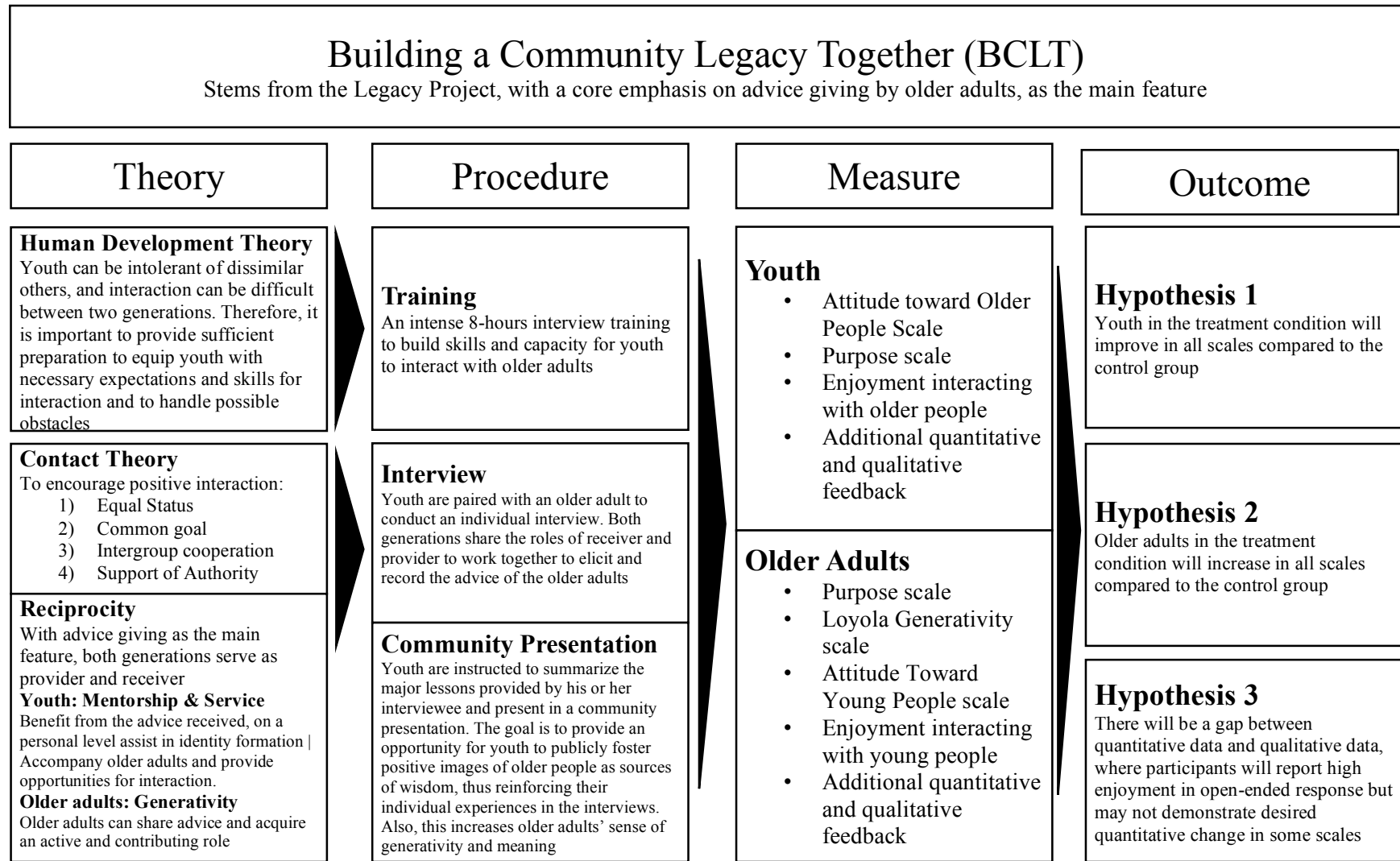


Figure 1. Conceptual Model of the BCLT

Table 1

Participated Counties by Year and Condition

Condition	Year 1	Year 2
Treatment	Cortland	
	Jefferson	
	Niagara	
	Sullivan	Orange Seneca Jefferson
Control	Ontario	
	Seneca	
	Wayne	

Table 2

Mean and Standard Deviation of Scales Examined on Youth

(Highest score)/ M(SD)	<u>Pretest</u>		<u>Posttest</u>	
	Treatment	Control	Treatment	Control
Attitudes toward older adults (4)	2.79(.39)	2.77(.38)	3.10(.41)	2.86(.36)
Purpose scale (5)	4.18(.63)	4.21(.56)	4.32(.61)	4.15(.73)
Enjoy interacting with older adults (4)	3.31(.64)	3.30(.54)	3.52(.62)	3.38(.44)

Table 3

General Linear Regression Model with Random Effect and Meta-Analysis Results of Youth

		Attitudes toward older adults	Purpose scale	Enjoyment interacting with older adults
	Intercept	$B = 1.52, t(57)=4.882, p<.001^{***}$	$B = 1.65, t(65)=2.93, p<.01^{**}$	
Year 1	Condition Treatment	$B = 0.24, t(4)=1.59, p=.181$	$B = .18, t(65)=1.19, p=.24$	
	Pretest	$B = .45, t(58)=4.21, p<.001^{***}$	$B = .60, t(65)=4.86, p<.001^{***}$	
	Intercept	$B = 1.43, t(35)=3.51, p<.01^{**}$	$B = .75, t(32)=1.52, p=.139$	$B = 1.46, t(23)=4.03, p<.001^{***}$
Year 2	Condition Treatment	$B = .32, t(35)=3.53, p<.01^{**}$	$B = .18, t(32)=1.41, p=.17$	$B = .07, t(36)=.59, p=.56$
	Pretest	$B = .55, t(35)=3.843, p<.001^{***}$	$B = .81, t(33)=6.63, p<.001^{***}$	$B = .60, t(36)=5.87, p<.001^{***}$
	Meta-analysis	$B=.30, SE=.08, p<.0001^{***};$ $Q(1)=.24, p=.63$	$B=.18, SE=.10, p=.07;$ $Q(1)=.0001, p=.99$	

*Note * $p<.05$, ** $p<.01$, *** $p<.001$

Table 4

Mean and Standard Deviation of Scales Examined on Older Adults

(Highest score)/ M(SD)	<u>Pretest</u>		<u>Posttest</u>	
	Treatment	Control	Treatment	Control
Purpose scale (5)	4.37(.59)	4.21(.60)	4.46(.53)	4.19(.60)
Loyola generativity scale (4)	3.03(.62)	3.02(.54)	3.01(.59)	2.98(.62)
Attitudes toward young people (4)	3.78(.53)	3.61(.51)	3.93(.57)	3.71(.49)
Enjoyment interacting with young people (4)	3.68(.53)	3.77(.47)	3.83(.30)	3.83(.29)

Table 5

General Linear Regression Model with Random Effect and Meta-Analysis Results of Older Adults

		Purpose scale	Loyola generativity scale	Attitudes toward young people	Enjoyment interacting with young people
	Intercept	$B = .87, t(65)=2.01, p<.5$	$B = .87, t(62)=2.58, p<.05*$		
Year 1	Condition Treatment	$B = .14, t(5)=1.19, p=.30$	$B = -.06, t(62)=-.51, p=.62$		
	Pretest	$B = .77, t(64)=7.841, p<.001***$	$B = .72, t(62)=6.89, p<.001***$		
	Intercept	$B = 1.38, t(35)=3.31, p<.01**$	$B = .28, t(30)=.85, p=.4$	$B = 1.20, t(34)=2.33, p<.05*$	$B = 2.65, t(35)=7.84, p<.001***$
Year 2	Condition Treatment	$B = .06, t(35)=.44, p=.66$	$B = .07, t(32)=.11, p=.55$	$B = -.01, t(34)=-.09, p=.93$	$B = .01, t(35)=.10, p=.92$
	Pretest	$B = .70, t(35)=6.92, p<.001***$	$B = .88, t(32)=8.50, p<.001***$	$B = .70, t(34)=4.96, p<.001***$	$B = .31, t(35)=3.53, p<.01**$
Meta-analysis		$B=.10, SE=.09, p=.24; Q(1)=.23, p=.63$	$B=.01, SE=.08, p=.93; Q(1)=.61, p=.43$		

*Note * $p<.05$, ** $p<.01$, *** $p<.001$